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FOREST PEST REPORTER

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GYPSY MOTH SPRAY PROGRAM SET

Last fall 13 municipalities requested gypsy moth egg mass surveys to delimit possible treatment areas for this spring. Of the 13 municipalities surveyed, nine had no gypsy moth infestation in residential areas while Tabernacle Township, Burlington County had the largest proposed treatment area (835 acres) but has chosen not to participate.

The three remaining municipalities did elect to participate in the voluntary treatment program. They are Southampton Township, Burlington County with 170 acres proposed; Carneys Point Township in Salem County with 95 acres of treatment area; and Oldmans Township with 120 acres in need of treatment.

All proposed spray blocks (see Table 1) will be treated with an undiluted application of *Bacillus thuringiensis* (B.t.) at a dosage rate of 30 BIU (3/4 gallon) per acre. The aerial spraying is expected to begin on May 10 and will be completed within a few days.

Table 1.- Pre-Treatment Egg Mass Counts by Block
Gypsy Moth Aerial Suppression Program. Year 2000 NJDA

Block Number	County	Pre-Treatment Egg Mass Counts/Acre	Acres to be Treated
1	Salem	1,720 / Ac.	30
2	Salem	1,320/ Ac.	50
3	Salem	560/ Ac.	60
4	Salem	800/Ac.	75
5	Burlington	1,080/Ac.	70
6	Burlington	560/Ac.	100
		Total	385

GYPSY MOTH SPRAY AND AERIAL SURVEY CONTRACTS AWARDED

Contract bid packets were mailed out to aerial vendors for the 2000 gypsy moth aerial suppression and aerial defoliation sketch mapping contracts. Downstown Aero Crop Service of Vineland was awarded the contract to conduct the aerial suppression program with a bid of $18.85 per acre, and Air Shuttle Service of Absecon was awarded the aerial sketch mapping contract with a bid of $98 per hour.

GYPSY MOTH SHOWS SIGNS OF INCREASING IN REGION

Gypsy moth infestations in the eastern half of the United States have gradually increased in both defoliation and suppression acres during the past five years (see Table 2). Pennsylvania, a gypsy moth bellwether for New Jersey, has experienced dramatic increases in both categories during the period, which could indicate growing problems with this pest in the Garden State in the future. In 1997 Pennsylvania had only 2,292 acres of gypsy moth defoliation but by 1998 that acreage increased to 31,611 and last year rose to 278,182. Gypsy moth suppression in Pennsylvania also increased from a zero acres in 1998 to 48,250 in 1999.

Table 2. - Last Five Years of Gypsy Moth Defoliation and Suppression in Eastern US

Year	1995	1996	1997	1998	1999
Acres Defoliated	1,418,537	199,377	49,180	362,210	475,153
Acres Suppression	470,822	347,346	97,443	152,517	160,779

Ground surveys conducted in northern New Jersey forests last summer and fall show a number of small, well-defined hot spots developing that could coalesce into a major outbreak in coming years. In addition, last spring the gypsy moth fungus disease did not appear to be a major factor in reducing the gypsy moth population in growing hot spots and in established infestations in the non-treated areas of Tabernacle Twp in Burlington County.

HEMLOCK WOOLLY ADELGID POPULATIONS DECLINE DUE TO JANUARY FREEZE

The cold winter temperatures have brought about heavy hemlock woolly adelgid, (HWA) mortality in the northern regions of the state. In areas with elevations above 950 feet or in the areas of the state in plant Zone 5, adelgid mortality was over 95%. The high HWA mortality will allow the trees to rebound since the trees will not be subjected to the heavy feeding by HWA that they experienced in the past. Unfortunately, the *Pseudoscymnus tsugae* rearing program may be adversely affected since finding adelgid collection sites for the colony will be far more difficult. In a search for collection sites, field staff, with help from the Bureau of Plant Pest and Disease Control and Bureau of Forestry, have been checking areas in Plant Hardiness Zone 6 and sites along riverbanks where the temperatures are a bit more moderate. In addition, the Delaware Water Gap National Recreation Area has allowed us to collect within the park boundaries for the first time. Some new infestations have been located but they may not be extensive enough to fulfill the needs of the laboratory.

Although HWA populations statewide have been significantly reduced by the combination of last year's drought and this winter's extreme cold, highest HWA mortality occurrred in the northwestern corner of the state. Unfortunately, HWA has a tendency to rebound quickly. If the hemlocks develop sufficient new growth this season, HWA will have an ample supply of food and will multiply rapidly. Releasing the predator beetle this summer while HWA populations are low and before they have a chance to multiply, will give the beetle an opportunity to catch up to a pest which has had a tremendous head start on them.

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